

CLAIMS

What is claimed is:

1. A tubing comprising a cross-linked polyamide layer defining a fluid conduit.
2. The tubing as recited in claim 1 wherein the polyamide layer is cross-linked by exposure to high-level radiation.
3. The tubing as recited in claim 1 wherein the polyamide layer further includes a cross-linking aid.
4. The tubing as recited in claim 3 wherein said cross-linking aid is triallyliscocyanurant.
5. The tubing as recited in claim 3 wherein said cross-linking aid is one of triallylcyanurate, trimethylolpropane trimethylacrylate, triallyl trimellitate, N,N'-m-phenylenediamaleimide and diallyl phthalate.
6. The tubing as recited in claim 1 wherein the polyamide layer is one of polyamide 11 and polyamide 12.
7. The tubing as recited in claim 1 further including an inner layer of a polyvinylidene fluoride, a middle layer of an adhesive, and the polyamide layer is an outer layer.
8. The tubing as recited in claim 7 wherein the middle layer is a modified polyvinylidene fluoride.
9. The tubing as recited in claim 7 wherein the polyamide layer has a thickness between 0.7 mm and 1.7 mm.

10. The tubing as recited in claim 7 wherein the inner layer has a thickness between 0.1 mm and 0.3 mm.
11. The tubing as recited in claim 7 wherein the middle layer has a thickness between 0.05 mm and 0.15 mm.
12. The tubing as recited in claim 1 wherein the tubing is a flexible water cooling tube.
13. The tubing as recited in claim 7 wherein at least one of the inner layer and the middle layer include one of an anti-oxidant and an inhibitor.
14. The tubing as recited in claim 13 wherein the one of the anti-oxidant and the inhibitor prevents cross-linking of at least one of the inner layer and the middle layer.

15. A method of forming a tubing comprising the steps of:
 - a) providing a layer of polyamide; and
 - b) exposing the layer of polyamide to radiation to cross-link the polyamide layer.
16. The method as recited in claim 15 wherein said step b includes exposing the layer of polyamide to high-level radiation.
17. The method as recited in claim 16 wherein said step b includes exposing the layer of polyamide to high-level radiation in cycles.
18. The method as recited in claim 16 wherein said step b includes exposing the layer of polyamide to high-level radiation in loads.
19. The method as recited in claim 16 wherein said step b includes employing one of electron beams, proton beams, gamma rays and x-rays.
20. The method as recited in claim 15 further including the step of thermoforming the layer of polyamide, and said step of thermoforming occurs before the step of exposing the layer of polyamide to radiation.
21. The method as recited in claim 15 further including the step of thermoforming the layer of polyamide, and said step of thermoforming occurs after the step of exposing the layer of polyamide to radiation.
22. The method as recited in claim 15 further including the step of mixing a cross-linking aid with polyamide to provide the layer of polyamide.
23. The method as recited in claim 22 wherein the cross-linking aid is triallyliscocyanurant.

24. A tubing comprising:
a first cross-linked layer of a thermoplastic selected from the group consisting of polyamide, aromatic nylon, polyolefin, polyvinyl chloride and polyester; and
a second layer of a thermoplastic.
25. The tubing as recited in claim 24 further including an adhesion layer that adheres the first layer to the second layer.
26. The tubing as recited in claim 24 wherein the first cross-linked layer of a thermoplastic further includes a cross-linking aid.
27. The tubing as recited in claim 26 wherein the cross-linking aid is triallyliscocyanurant.
28. The tubing as recited in claim 24 wherein the first cross-linked layer is cross-linked by exposure to high-level radiation.
29. The tubing as recited in claim 24 wherein the second layer includes one of an anti-oxidant and an inhibitor.
30. The tubing as recited in claim 29 wherein the one of the anti-oxidant and the inhibitor prevents cross-linking of the second layer.